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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/907,687	08/08/97	SABOURIN M	AZNDR/346/US

EXAMINER	
ALVO, M	
ART UNIT	PAPER NUMBER
1731	22

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DATE MAILED: 10/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	08/907,687	SABOURIN, MARC J.	
	Examiner	Art Unit	
	Steve Alvo	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,7,23-27,29 and 31-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,7,23-27, 29 and 31-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

The arguments with respect to the disclosure of "15 to 25 psig" are not convincing as the claims are drawn to a mechanical pulping process. The specification discloses in the paragraph bridging pages 3 and 4 that for TMP pulp the temperature should be 90-120 ^{o}C and 15-25 psi. In the Table supplied by Applicant in the 7-19-01 amendment, 15.0-25 psig corresponds to saturated steam temperatures of 121-129 ^{o}C. These temperatures, 121-129 ^{o}C, fall outside the temperature range of 90-120 ^{o}C. Clearly the disclosed 15-25 psi would correspond to psia and not psig. The pressure values 15-25 psia, correspond to the disclosed temperature range of 90-120 ^{o}C, e.g. 15-25 psia corresponds to temperatures of 101 to 116 ^{o}C. The specification states that for TMP pulps temperatures above 120 ^{o}C can not be used as it discolors the wood chips and components thereof (page 3, lines 27-29). Applicant does disclose higher temperatures of 120-150 ^{o}C and pressure 25-100 psi can be used, see the instant specification, page 4, lines 4-10. However, this is for chemical pulp and not the claimed mechanical pulp.

Claims 2, 7, 23-27, 29 and 31-38 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The term "15 to 25 psig" was not originally disclosed.

The arguments with respect to the steam temperatures are not convincing as it would have been obvious to use higher temperatures to decrease the conditioning times. The use of temperatures above 100 deg. C is taught by CEDERQUIST and/or PRUSAS and/or LUNAN et

al. No criticality has been shown for the newly claimed high temperatures and pressures compared to the disclosed lower temperatures, e.g. the disclosed 10 psi and 90 deg. C.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 29, 2, 23-26, 31, 32 and 34 are rejected under 35 U.S.C. 103(a) as obvious over CEDERQUIST et al with or without PRUSAS et al or EP 0 034 560 or MINTON.

CEDERQUIST et al teaches conditioning lignocellulosic fiber material with saturated steam at a temperature of 90-100 ^{o}C and at atmospheric pressure (14.7 psi.), compressing the material to remove water to a dryness of at least 50%, subsequent to the step of compressing preheating the material in an environment of saturated steam at a temperature of 130-200 ^{o}C. It is noted that the instant process can operate at pressures as low as 10 psi (see specification, page 3, line 15). A temperature of 200 ^{o}C would be above the glass transition temperature. It would obvious to use a compression ratio necessary to obtain the desired moisture in the pulp. It is well known that higher temperatures and pressures reduce reaction times. It would have been obvious to increase the pressure and temperature of the conditioning step to reduce the treatment time. Applicant uses the same type of apparatus to compress and destructure the fibers, e.g. a screw

press, used by CEDERQUIST et al. The "destructuring the fibers without significant breakage across grain boundaries" is a direct result of the "conditioning" of the fibers. The same "conditioning" is taught by the applied art. At best Applicant is optimizing the "conditioning" of the prior art. There is a reasonable expectation that the conditioning of the prior art would yield a feed material having the desired amount of destructuring. *In re O'Farrel*, 7 USPQ2d 1673, 1680-81. In any event, it is well settled that an artisan with ordinary skill would have found it obvious to determine workable or even optimum values for an art recognized, result effective parameter, such as the proper amount of compression, *In re Boesch*, 205 USPQ 215, 219; *In re Aller*, 105, USPQ 233, 235. If the compression ratio is not obvious over CEDERQUIST et al, then the use of a compression ratio of at least 4:1 is taught by PRUSAS et al (column 4, lines 41-43 and column 8, lines 17-23) or EP 0 034 560 or MINTON. It would have been obvious to compress the material of CEDERQUIST et al in the manner taught by PRUSAS et al or EP 0 034 560 (column 3, lines 21-23) or MINTON (column 3, lines 17-24) to prepare the fibers for refining by reducing the moisture content and/or destructuring the fibers. It would have been especially obvious to use higher presteaming temperatures, e.g. above 100 deg. C, as such is taught by PRUSAS (column 4, lines 41-49).

Claims 7, 27, 33 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over CEDERQUIST et al with or without PRUSAS et al or MINTON as applied to claim 29 above, and further in view of EP 0 034 560.

EP 0 034 560 teaches pretreating the lignocellulosic material with steam prior to compression and refining in the same manner taught by CEDERQUIST et al. CEDERQUIST et al is silent as to the time of treatment, while EP 0 034 560 teaches steam pretreatment using the same temperature 100 ^{o}C and pressure atmospheric as CEDERQUIST et al. It would have been obvious to use the same time for pretreatment for CEDERQUIST et al as taught by EP 0 034 560, e.g. 60 seconds (page 5, line 4) as they are performing the same steam pretreatment.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over CEDERQUIST et al with or without PRUSAS et al or MINTON as applied to claim 29 above, and further in view of LUNAN et al.

LUNAN et al teaches that higher pressures can be used during presteaming in a TMP process by using short steaming times, e.g. 16 seconds or lower. It would have been obvious to the routineer that the treatment times in the presteaming stages of CEDERQUIST could be shortened to 16 seconds or less, by increasing the pressure and temperature during the presteaming stages.

The argument that Example 1, Table A shows unexpected results is not convincing. Example 1 only compares a single high temperature preheating stage to a process with a low temperature preheating stage. This is not the closest prior art. CEDERQUIST teaches the same low temperature-high temperature (e.g. above glass transition temperature) treatment disclosed by Applicant. The second pretreatment stage of CEDERQUIST teaches using temperatures above 100 ^{o}C, preferably temperatures of 130-200 ^{o}C (CEDERQUIST, column 2, lines 19-20,

column 3, lines 22-23 and last 2 lines. Besides the claims are not commensurate in scope the Example. For example, a temperature of 128 ^{o}C has not been claimed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the **primary examiner** should be directed to **Steve Alvo** whose telephone number is **(703) 308-2048**. The Examiner can normally be reached on Monday - Friday from **6:00 AM - 2:30 PM** (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stanley Silverman, can be reached on 703-308-3837.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Group receptionist** whose telephone number is **(703) 308-0661**.

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Carolyn E. Johnson, Marshall Gaddis, Bessie Bowie, Lucy Jones.

MSA
October 5, 2001

STEVE ALVO
PRIMARY EXAMINER
ART UNIT 1731